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EXAMINER

BLACK, LINH

ART UNIT

PAPER NUMBER

2163

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 09/882,634 | Applicant(s) HARRIS ET AL. | |
| | Examiner LINH BLACK | Art Unit 2163 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-32 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to the document dated 9/30/05. Claims 1-32 are pending in the application. Claims 1, 10, 14, 19, 28, 31-32 are independent claims.

Affidavit under 37 C.F.R. § 1.131

The affidavit filed on 30 September 2005 under 37 CFR § 1.131 has been considered but is ineffective to overcome the **Microsoft Corporation** reference, Vedula et al. (US 2005/0015732).

MPEP § 715.07 (I) states, *inter alia*,

The essential thing to be shown under 37 CFR § 1.131 is priority of invention and this may be done by any satisfactory evidence of the fact. FACTS, not conclusions, must be alleged. Evidence in the form of exhibits may accompany the affidavit or declaration. Each exhibit relied upon should be specifically referred to in the affidavit or declaration, in terms of what it is relied upon to show.

A general allegation that the invention was completed prior to the date of the reference is not sufficient. *Ex parte Saunders*, 1883 C.D. 23, 23 O.G. 1224 (Comm'r Pat. 1883). Similarly, a declaration by the inventor to the effect that his or her invention was conceived or reduced to practice prior to the reference date, without a statement of facts demonstrating the

correctness of this conclusion, is insufficient to satisfy 37 CFR § 1.131.

The affidavit or declaration and exhibits must clearly explain which facts or data applicant is relying on to show completion of his or her invention prior to the particular date. Vague and general statements in broad terms about what the exhibits describe along with a general assertion that the exhibits describe a reduction to practice "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and, thus, does not satisfy the requirements of 37 CFR § 1.131(b). *In re Borkowski*, 505 F.2d 713, 184 USPQ 29 (CCPA 1974). Applicant must give a clear explanation of the exhibits pointing out exactly what facts are established and relied on by applicant. 505 F.2d at 718-19, 184 USPQ at 33. See also *In re Harry*, 333 F.2d 920, 142 USPQ 164 (CCPA 1964) (Affidavit "asserts that facts exist but does not tell what they are or when they occurred.")

In the case of the instant affidavit, it appears that the Applicant has clearly set out specific facts which attempt to demonstrate that the claimed invention was reduced to practice before the date of the applied references, supported by four exhibits. As such, the Applicant has met his burden under 37 C.F.R. § 1.131(b).

From MPEP § 715.07 (III):

The affidavit or declaration must state FACTS and produce such documentary evidence and exhibits in support thereof as are available to show conception and completion of invention in this country or in a NAFTA or WTO member country (MPEP § 715.07(c)), at least the conception being at a date prior to the effective date of the reference. Where there has not been reduction to practice prior to the date of the reference, the applicant or patent owner must also show diligence in the completion of his or

her invention from a time just prior to the date of the reference continuously up to the date of an actual reduction to practice or up to the date of filing his or her application (filing constitutes a constructive reduction to practice, 37 CFR § 1.131). As discussed above, 37 CFR § 1.131(b) provides three ways in which an applicant can establish prior invention of the claimed subject matter. The showing of facts must be sufficient to show:

(A) reduction to practice of the invention prior to the effective date of the reference; or

(B) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to a subsequent (actual) reduction to practice; or

(C) conception of the invention prior to the effective date of the reference coupled with due diligence from prior to the reference date to the filing date of the application (constructive reduction to practice).

Conception is the mental part of the inventive act, but it must be capable of proof, as by drawings, complete disclosure to another person, etc. In *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897), it was established that conception is more than a mere vague idea of how to solve a problem; the means themselves and their interaction must be comprehended also.

From MPEP § 2138.04[R-1]:

Conception has been defined as "the complete performance of the mental part of the inventive act" and it is "the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice...." *Townsend v. Smith*, 36 F.2d 292, 295, 4 USPQ 269, 271 (CCPA 1930). "[C]onception is established when the invention is made sufficiently clear to enable one skilled in the art to reduce it to practice without the exercise of extensive experimentation or the exercise of inventive

skill." *Hiatt v. Ziegler*, 179 USPQ 757, 763 (Bd. Pat. Inter.1973). Conception has also been defined as a disclosure of an invention which enables one skilled in the art to reduce the invention to a practical form without "exercise of the inventive faculty." *Gunter v. Stream*, 573 F.2d 77, 197 USPQ 482 (CCPA 1978). See also *Coleman v. Dines*, 754 F.2d 353, 224 USPQ 857 (Fed. Cir. 1985) (It is settled that in establishing conception a party must show possession of every feature recited in the count, and that every limitation of the count must have been known to the inventor at the time of the alleged conception. Conception must be proved by corroborating evidence.)

In the case of the instant affidavit, since the Applicant is alleging actual reduction to practice before the date of the applied references, the date of conception is not an issue.

Regarding diligence, MPEP § 715.07(a) states:

Where conception occurs prior to the date of the reference, but reduction to practice is afterward, it is not enough merely to allege that applicant or patent owner had been diligent. *Ex parte Hunter*, 1889 C.D. 218, 49 O.G. 733 (Comm'r Pat. 1889). Rather, applicant must show evidence of facts establishing diligence.

What is meant by diligence is brought out in *Christie v. Seybold*, 1893 C.D. 515, 64 O.G. 1650 (6th Cir. 1893). In patent law, an inventor is either diligent at a given time or he is not diligent; there are no degrees of diligence. An applicant may be diligent within the meaning of the patent law when he or she is doing nothing, if his or her lack of activity is excused. Note, however, that the record must set forth an explanation or excuse for the inactivity; the USPTO or courts will not speculate on possible

explanations for delay or inactivity. See *In re Nelson*, 420 F.2d 1079, 164 USPQ 458 (CCPA 1970). Diligence must be judged on the basis of the particular facts in each case. See MPEP § 2138.06 for a detailed discussion of the diligence requirement for proving prior invention.

Under 37 CFR 1.131, the critical period in which diligence must be shown begins just prior to the effective date of the reference or activity and ends with the date of a reduction to practice, either actual or constructive (i.e., filing a United States patent application). Note, therefore, that only diligence before reduction to practice is a material consideration. The "lapse of time between the completion or reduction to practice of an invention and the filing of an application thereon" is not relevant to an affidavit or declaration under 37 CFR 1.131. See *Ex parte Merz*, 75 USPQ 296 (Bd. App. 1947).

As stated above, since the Applicant alleges an actual reduction to practice prior to the date of the applied reference, diligence is not at issue.

Regarding reduction to practice, MPEP § 715.07 states:

In general, proof of actual reduction to practice requires a showing that the apparatus actually existed and worked for its intended purpose.

From MPEP § 2138.05:

Reduction to practice may be an actual reduction or a constructive reduction to practice which occurs when a patent application on the claimed invention is filed. The filing of a patent application serves as conception and constructive reduction to practice of the subject matter described in the application. Thus the inventor need not provide evidence of either conception or actual reduction to practice when relying on

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the content of the patent application. *Hyatt v. Boone*, 146 F.3d 1348, 1352, 47 USPQ2d 1128, 1130 (Fed. Cir. 1998).

When a party to an interference seeks the benefit of an earlier-filed U.S. patent application, the earlier application must meet the requirements of 35 U.S.C. § 120 and 35 U.S.C. § 112, first paragraph for the subject matter of the count. The earlier application must meet the enablement requirement and must contain a written description of the subject matter of the interference count. *Hyatt v. Boone*, 146 F.3d 1348, 1352, 47 USPQ2d 1128, 1130 (Fed. Cir. 1998). Proof of a constructive reduction to practice requires sufficient disclosure under the "how to use" and "how to make" requirements of 35 U.S.C. § 112, first paragraph. *Kawai v. Metlesics*, 480 F.2d 880, 886, 178 USPQ 158, 163 (CCPA 1973) (A constructive reduction to practice is not proven unless the specification discloses a practical utility where one would not be obvious. Prior art which disclosed an anticonvulsant compound which differed from the claimed compound only in the absence of a -CH₂- group connecting two functional groups was not sufficient to establish utility of the claimed compound because the compounds were not so closely related that they could be presumed to have the same utility.). The purpose of the written description requirement is "to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him." *In re Edwards*, 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978). The written description must include all of the limitations of the interference count, or the applicant must show that any absent text is necessarily comprehended in the description provided and would have been so understood at the time the patent application was filed. Furthermore, the written description must be sufficient, when the entire specification is considered, such that the "necessary and only reasonable construction" that would be given it by a person skilled in the art is one that clearly supports each positive limitation in the count. *Hyatt v. Boone*, 146 F.3d at 1354-55, 47 USPQ2d at 1130-1132 (Fed. Cir. 1998) (The claim could be read as describing subject matter other than that of the count and thus did not establish that the applicant was in possession of the invention of the count.). See also *Bigham v. Godtfredsen*, 857 F.2d 1415, 1417, 8 USPQ2d 1266, 1268 (Fed. Cir. 1988) ("[t]he generic term halogen comprehends a limited

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number of species, and ordinarily constitutes a sufficient written description of the common halogen species, except where the halogen species are patentably distinct).

"The nature of testing which is required to establish a reduction to practice depends on the particular facts of each case, especially the nature of the invention." *Gellert v. Wanberg*, 495 F.2d 779, 783, 181 USPQ 648, 652 (CCPA 1974) ("an invention may be tested sufficiently ... where less than all of the conditions of actual use are duplicated by the tests"); *Wells v. Fremont*, 177 USPQ 22, 24-5 (Bd. Pat. Inter. 1972) ("even where tests are conducted under bench' or laboratory conditions, those conditions must fully duplicate each and every condition of actual use' or if they do not, then the evidence must establish a relationship between the subject matter, the test condition and the intended functional setting of the invention," but it is not required that all the conditions of all actual uses be duplicated, such as rain, snow, mud, dust and submersion in water).

Applicant attempts to establish prior invention by showing reduction to practice of the invention prior to September 14, 2000, the effective filing date of Vedula.

Applicant must establish that what was reduced to practice is within the scope of the claimed invention. As described below, the exhibits do not support this conclusion. Applicant has failed his burden to establish that the entire claimed invention, including all of the claimed features and limitations, was included as part of the Exhibits B-D.

Proof of actual reduction to practice requires a showing that the apparatus actually existed and worked for its intended purpose.

Regarding Exhibit B, statement on page 4, last paragraph "This application of the described technology, bridging of the ATT and IBM

problem management systems, has been implemented and deployed at a customer site in" is contradicted with the question 4, on page 5, "Was the subject matter of your invention or a product incorporating your invention used in public e.g. outside IBM or in the presence of non-IBMer? No".

Clarification is requested.

Regarding the "Last Modified On:" field of Exhibit B, a question is raised in that is Exhibit B prior to September 2000?

Clarification/confirmation is required.

Insofar as applicant is relying on the Exhibit D to establish Reduction to Practice (Applicant's argument, page 10, third paragraph). However, Applicant must give a clear explanation what facts are established and relied on by applicant, which part of the source code teaches which limitation of the invention, with explanations.

Furthermore, the submission of a source code listing fails to provide evidence that the program successfully ran and performed for instance, the claimed limitations. Proof can be supplied in the form of documented testing of the software.

Testing is required unless operativeness of invention is readily apparent (e.g. for simple mechanical invention).

Testing, if required, must be under actual working conditions or realistic simulation of working conditions.

Test results must be repeatable.

Finally, the Applicants should note the provisions of MPEP § 715.02(I):

I. SWEARING BEHIND ONE OF A PLURALITY OF COMBINED REFERENCES

Applicant may overcome a 35 U.S.C. 103 rejection based on a combination of references by showing completion of the invention by applicant prior to the effective date of any of the references; applicant need not antedate the reference with the earliest filing date. However, as discussed above, applicant's 37 CFR 1.131 affidavit must show possession of either the whole invention as claimed or something falling within the claim(s) prior to the effective date of the reference being antedated; it is not enough merely to show possession of what the reference happens to show if the reference does not teach the basic inventive concept.

Where a claim has been rejected under 35 U.S.C. 103 based on Reference A in view of Reference B, with the effective date of secondary Reference B being earlier than that of Reference A, the applicant can rely on the teachings of Reference B to show that the differences between what is shown in his or her 37 CFR 1.131 affidavit or declaration and the claimed invention would have been obvious to one of ordinary skill in the art prior to the date of Reference A. However, the 37 CFR 1.131 affidavit or declaration must still establish possession of the claimed invention, not just what Reference A shows, if Reference A does not teach the basic inventive concept.

For the reasons cited above, the affidavit filed by the Applicant under 37 C.F.R. § 1.131 fails to establish that the claimed invention was reduced to practice prior to the critical period. As such, the affidavit is insufficient to establish invention prior to the prior art references relied upon in the rejections of record. The rejections are maintained by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-6, 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Vedula et al. (US 2005/0015732).

Vedula et al. anticipated the independent claims 1, 28 by the following: (in the specification, page 7, 1st paragraph, Applicants state that "datasets comprise data stored according to a data schema form for the respective data source and/or data target or destination.")

receiving a dataset, comprising a set of data elements with corresponding data values, from a source data system – fig. 1; paragraphs 0010, 0069-0072.

translating the dataset from a source schema to a target schema, each schema comprising a set of data elements and a set of relationships among the data elements, according to a set of mapping rules, each rule comprising a type and instructions for obtaining one or more target data element values as a function of one or more source data element values, the type containing all the information about relationships among data elements used by the function – pars. 0003, 0009, 0011-0012, 14-15, 0068, 0082, and 0098.

queuing the translated dataset in persistent storage; and sending the translated dataset from the persistent storage to a destination data system – fig. 14, items 327-331; pars. 0100-0101.

Vedula et al. anticipated claim 3 by the following:

wherein the dataset comprises an XML document – pars. 0032, 0072.

Vedula et al. anticipated claims 4-5 by the following:

wherein the instructions of each mapping rule comprise a computer program; wherein the computer program comprises a Java program – pars. 0011-0015, 0019, 0085.

Vedula et al. anticipated claim 6 by the following:

wherein the computer program refers only methods of the Java String class – par. 0015.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vedula et al. (US 2005/0015732), and further in view of Walker (US 2004/0015840).

As per claim 2 and 29, Vedula et al. do not explicitly disclose assigning a key to each new request. However, Walker teaches mechanism for converting between java classes and XML – the title. Walker also teaches translating between java classes and xml data – par. 0025. Walker teaches keys, requests, and class types – pars. 0057, 0060, 0091, 0107. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.'s teaching with Walker's teaching in order to store and retrieve dataset efficiently based on the request/translated dataset key.

Claims 7-8, 14-15, 18-26, 30, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vedula et al. (US 2005/0015732), and further in view of Alao et al. (US 2002/0108121).

As per claims 7, 30, Vedula et al. do not explicitly disclose an ACK from the destination system. However, Alao et al. teach "service gateway for interactive television" – the title. Alao et al. teach: "the service gateway provides asymmetrical routing, data compression and encryption to optimize client processing power and communication link bandwidth. The service

gateway enables content translation between clients and service providers."

– the abstract; content translations – pars. 0028, 0129, 0139, 0142, 0152, 0164-0166. Alao et al. teach waiting a set period of time to receive an ACK from the destination system; retrying to send translated dataset to destination system a set number of times – pars. 0040, 0079, 0082-0083, 0088, 0090; signaling an error if ACK is not received – pars. 0092, 0105; upon receipt of ACK, removing translated dataset from persistent memory – pars. 0059, 0067, 0097, 0102, and 0179. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.'s teaching with Alao's teaching in order to allow the transmitting of translated data processed sufficiently and successfully by checking on ACKs to make sure the destination systems get the data they suppose to get.

As per claim 8, Vedula et al. do not explicitly disclose a finite number of pre-specified rule types. However, Alao et al. teach wherein there are a finite number of pre-specified rule types that are defined generally for XML documents – pars. 0070, 0146, 0150, 0197. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.'s teaching with Alao's teaching to allow a set number

of rule types so that datasets between systems can be translated according to.

As per claims 14-15, 32, Vedula et al. teach receiving a neutral dataset, wherein the neutral dataset is an XML document – fig. 1; paragraphs 0010, 0069-0072; translating the neutral dataset to a first destination dataset according to a destination schema – pars. 0003, 0009, 0011-0012, 14-15, 0068, and 0098; if the neutral dataset has certain specified data values, reading from the destination database a second destination dataset – par. 0075; modifying the first destination dataset according to information in the second destination dataset – pars. 0017, 0080, 0084-0087; transmitting the first destination dataset to the destination database – fig. 14, items 327-331; pars. 0100-0101. Vedula et al. do not explicitly disclose acknowledging a successful transmission of the destination dataset. However, Alao et al. teach “service gateway for interactive television” – the title. Alao et al. teach: “the service gateway provides asymmetrical routing, data compression and encryption to optimize client processing power and communication link bandwidth. The service gateway enables content translation between clients and service providers.” – the abstract; content translations – pars. 0028, 0129, 0139, 0142, 0152, 0164-0166. Alao et al. teach acknowledging a successful transmission of the

destination dataset - pars. 0040, 0079, 0082-0083, 0088, 0090-0096.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.'s teaching with Alao's teaching in order to allow the transmitting of translated data processed sufficiently and successfully by checking on ACKs to make sure the destination systems get the data they suppose to get.

As per claim 18, Vedula et al. teach wherein the steps of translating, reading, modifying, and transmitting are performed according to a computer program that takes as input the dataset to be converted and a preset file derived from a database schema so that when the database schema changes, the computer program can be run on the modified file to accommodate the change - pars. 0011, 0016-0017, 0022, 0071-0072.

As per claim 19, Vedula et al. teach a component that transforms XML documents into XML documents - par. 0072. Vedula et al. do not explicitly disclose a plurality of application specific gateway components, communicatively coupled to said bridge component, each gateway transforming XML documents to and from documents in application specific formats. However, Alao et al. teach "service gateway for interactive television" - the title. Alao et al. teach: "the service gateway provides

asymmetrical routing, data compression and encryption to optimize client processing power and communication link bandwidth. The service gateway enables content translation between clients and service providers." – the abstract; content translations – pars. 0028, 0129, 0139, 0142, 0152, 0164-0166. Alao et al. teach acknowledging a successful transmission of the destination dataset - pars. 0040, 0079, 0082-0083, 0088, 0090. Alao et al. teach: "a plurality of application specific gateway components, communicatively coupled to said bridge component, each gateway transforming XML documents to and from documents in application specific formats" – pars. 0045, 0099-00100, 0139, 0146, 0150-0151, 0173-0174, 0197. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.'s teaching with Alao's teaching to allow data to be transformed between formats processed efficiently.

As per claim 20, Vedula et al. teach storing the XML documents in persistent storage - fig. 14, items 327-331; pars. 0100-0101. Vedula et al. do not explicitly disclose volatile storage. However, Alao et al. teach the gateways keep their work in volatile storage - pars. 0167, 0176-0177, 0188. Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to combine Vedula et al.'s teaching with Alao's teaching to allow data to be transformed between formats processed efficiently.

As per claims 21-22, Vedula et al. teach an interface for mapping a source schema to a target schema – par. 0011; the bridge transforms XML documents according to a set of mapping rules - pars. 0009, 0011-0012, 14-15, 0068, and 0098; interface may provide links to other sources of function objects such as web pages – par. 0082. Vedula et al. do not explicitly disclose a web administrative interface communicatively accessible by means of a browser. However, Alao et al. teach a web administrative interface communicatively accessible by means of a browser – pars. 0174, 0177, 0189-0190, 0192. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.'s teaching with Alao's teaching in order to take advantage of the standard web-based interface, which can be accessed by a number of systems.

As per claim 23, Vedula et al. teach wherein the each mapping rule comprises a type and instructions for obtaining one or more target data element values as a function of one or more source data element values, the type containing all the information about relationships among data elements used by the function - pars.

Vedula et al. anticipated claims 24-25 by the following:

wherein the instructions of each mapping rule comprise a computer program; wherein the computer program comprises a Java program – pars. 0011-0015, 0019, 0085.

As per claim 26, Vedula et al. teach a set of mapping rules/indicia – pars.

0011-0012, 0016-0017; translate an XML to XML according to the mapping indicia - pars. 0003, 0009, 0011-0012, 14-15, 0068, and 0098.

a persistent memory device, communicatively coupled to said XML to XML

translator - fig. 14, items 327-331, pars. 0100-0101; an interface

communicatively coupled to said XML to XML translator - par. 0011. Vedula

et al. do not explicitly disclose an XML parser. However, Alao et al. teach an

XML parser – pars. 0036, 0135, 0183, 0186, 0191. Thus, it would have

been obvious to one of ordinary skill in the art at the time of the invention to

combine Vedula et al.'s teaching with Alao's teaching in order to help the

XML translator work quicker and more efficiently because the source XML

documents are preprocessed in some fashion, thus, provide the translator

with the XML information in a form that is easier to work with.

Claims 10-13 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vedula et al. (US 2005/0015732), and further in view of Williams (US 6591272).

As per claim 10, and 31, Vedula et al. teach converting source dataset to a neutral dataset according to a source schema – pars. 0009, 0068, 0071-0072; sending the neutral dataset to a destination via a network interface – pars. 0008, 0067, 0100. Vedula et al. do not explicitly disclose scanning a database for outgoing requests. However, Williams teaches “method and apparatus to make and transmit objects from a database on a server computer to a client computer” – the title; data schemas and translating of data objects into desired data objects – col. 4, lines 48-59; col. 7, lines 27-51; scanning a database - col. 10, lines 3-17; col. 22, lines 7-9; col. 35, lines 4-15. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.’s teaching with Williams’ teaching in order to efficiently and quickly read requests from a database.

Williams anticipated claim 11 by the following:

wherein the neutral dataset is an XML document – pars. 0009, 0068, 0071.

As per claim 12, Williams does not disclose wherein the source dataset is an SQL result-set. However, Williams teaches source dataset is an SQL result-set – col. 5, 1st paragraph; col. 35, lines 2-15. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula et al.'s teaching with Williams' teaching to better allow different systems to communicate with each other.

As per claim 13, Vedula et al. teach wherein the step of converting is performed according to a computer program that takes as input the dataset to be converted and a preset file derived from a database schema so that when the database schema changes, the computer program can be run on the modified file to accommodate the change – pars. 0016-0017, 0022, 0071.

Claim 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vedula et al. (US 2005/0015732), and further in view of Draper et al. (US 6581062).

As per claim 27, Vedula et al. do not explicitly teach an SQL to XML translator, an XML to SQL translator. However, Draper et al. teach an SQL to XML translator, an XML to SQL translator – col. 1, line 65 to col. 2, line

20; col. 7, line 17 to col. 8, line 45. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula's teaching with Dungan et al.'s teaching in order to allow communications between different computer systems (XML and SQL).

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vedula et al. (US 2005/0015732), and further in view of Dungan et al. (USP 6363411).

As per claim 16-17, Vedula et al. do not explicitly suggest null data values. However, Dungan et al. teach "intelligent network" – the title. Dungan et al. teach replacing null data values in the first dataset with corresponding data values from the second destination dataset, the correspondence being pre-specified constant values – col. 46, lines 8-65; col. 110, line 25 to col. 111, line 35. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Dungan et al.'s teaching with Vedula's teaching in order to better provide services to users.

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 9/30/05 have been fully considered but they are not persuasive.

Regarding Applicants' argument on pages 11 and 12, 1st paragraph that "None of the paragraphs from the Vedula publication teach the idea that a mapping rule may be constructed as a type plus a set of instructions... The explicit use of the type allows a user to represent with simple instructions what to do about repeating elements and groups of elements in an XML schema. For example, the invention allows us to specify that one set of repeating....tree structure". Examiner finds the argument not persuasive. The limitation "The explicit use of the type allows a user to represent with simple instructions what to do about repeating elements and groups of elements in an XML schema. For example, the invention allows us to specify that one set of repeating..." is not in claim 1's language. However, Vedula et al. teach:

"An XSL style sheet is a form of mapping which includes a template of the desired target structure, and identifies data in the source document to insert into this template. This model for merging data and templates is referred to as the template-driven model and works well on regular and **repetitive data**. XSL also provides capabilities for handling highly irregular and recursive data such as is typical in documents. Template fragments are defined, and the XSL processor combines the results of these fragments into a final result tree based on the shape of the source data. Each template fragment declares the type and context of source nodes it is appropriate for, allowing the XSL processor to match source nodes with template fragments. This model is known as the data-driven model since the shape of the data drives the shape of the final output. An XSL transformation process is thus independent of any particular output grammar and can be used for **translating XML data from one schema (source) to another (target).**"
– paragraphs 0009-0010.

"While some of the implementations and aspects of the invention are illustrated and described hereinafter with respect to source and target objects which are XML schemas, the invention finds application with any type of source or target objects including, for example, schemas, databases, spreadsheets, documents, and the like. It will further be appreciated that the invention further contemplates a computer-readable

storage medium having computer-executable instructions for creating a mapping in a graphical user interface." – par. 0068.

"Referring also to FIGS. 6C and 6D, the function objects or functoids 16b may be presented to the user in grouped fashion. Such grouped functoids 16b may thus be presented to the user via a plurality of pallets, such as functoid pallet 66 of FIG. 6C and pallet 68 of FIG. 6D, where the groupings are according to the function type of the function objects 16b. For example, a mathematical function object pallet grouping 66 may be provided with one or more mathematical function objects 16b1, and a logical function object pallet 68 may be provided with logical function objects 16b2. It will be further appreciated in this regard that the user interface according to the invention may provide links (e.g., via the Internet) to other sources of function objects or functoids 16b, such as through a web page. The function object 16b, moreover, may have script or code associated therewith which may be used by a mapping compiler in generating output code associated with the mapping of mapping screen region 12." – par. 0082.

Regarding Applicants' argument on page 12 that "Applicants believe that Vedula et al. do not teach the presently claimed invention as recited for claim 3", Examiner finds the argument not persuasive. Claim 3 recites

"wherein the dataset comprises an XML document". Vedula et al. teach "An XSL transformation process is thus independent of any particular output grammar and can be used for **translating XML data from one schema (source) to another (target)**." – paragraphs 0009-0010; "While some of the implementations and aspects of the invention are illustrated and described hereinafter with respect to source and target objects which are XML schemas, the invention finds application with any type of source or target objects including, for example, schemas, databases, spreadsheets, documents, and the like. It will further be appreciated that the invention further contemplates a computer-readable storage medium having computer-executable instructions for creating a mapping in a graphical user interface" – par. 0068; fig. 2, items 20-28.

Regarding Applicants' argument on page 13, paragraph 4 that "the Examiner's reliance upon the aforementioned paragraph of Vedula et al., is misplaced because this paragraph teaches only that string class methods may be used." Examiner finds the argument not persuasive.

Vedula et al. teach the translating of source-XML documents to target-XML documents as cited above. Vedula et al. also teach "The mapping region of the user interface provides a functoid palette whereby a user may view available functoid icons which may be placed anywhere in the mapping

or grid region using a drag and drop mechanism. The functoid palette includes several categories of functoid groupings, such as String, Mathematical, Logical, Date, Conversion, Scientific, and Advanced... User-defined functoids are available to users wishing to create custom mapping functionality by writing script. The script may be, for example, visual basic script, visual C++, java script, or any ActiveX scripting language. The interface allows the creation of the functoid script, as well as the editing of the parameters and script associated with existing functoids." – par. 0015.

"A compiler associated with the interface may embed the script displayed in the interface 82 into compiled output code for execution by a runtime engine (not shown) in translating source documents into target documents. While the exemplary function object script illustrated in FIG. 7D is shown in eXtensible Stylesheet Language (XSL), it will be appreciated that other code or script is possible within the scope of the invention including, for example, Java script, visual basic script, and other active X script." – par. 0085.

Regarding Applicants' argument on page 15 that "Alao et al. do not teach about mapping rules (from schema to schema) but about business rules that determine where datasets are to be sent and what is to be done with them. Nowhere does Alao et al., teach about a mapping rule type that captures all

source schema information about relationships among a set of data elements (see the Claim 1). Paragraphs, 0070, 0146, 0150, and 0197 of Alao et al., do not mention "types" in this sense. Note that the word "type" is used here in a technical (mathematical) sense, rather than as a synonym for the word "kind". Neither Vedula et al., nor Alao et al., nor any combination teach about this notion of type, nor is the notion implicit in their teaching."

Examiner finds the argument not persuasive.

Claim 8 recites "wherein there are a finite number of pre-specified rule types that are defined generally for XML documents." However, Vedula et al.'s teachings do meet the Applicants' limitations of claim 1. Please see response to claim 1 above. However, Alao et al. teach "service gateway for interactive television" – the title. Alao et al. teach: "The service gateway enables content translation between clients and service providers" – the abstract; content translations – pars. 0028, 0129, 0139, 0142, 0152, 0164-0166. Alao et al. teach waiting a set period of time to receive an ACK from the destination system; retrying to send translated dataset to destination system a set number of times – pars. 0040, 0079, 0082-0083, 0088, 0090; signaling an error if ACK is not received – pars. 0092, 0105; upon receipt of ACK, removing translated dataset from persistent memory – pars. 0059, 0067, 0097, 0102, and 0179. Alao et al. teach wherein there are a finite number of pre-specified rule types that are defined generally for XML

documents – pars. 0046-0049, 0070, 0146, 0150, 0197. Examiner finds that Alao et al. thus, teach XML documents translations based on rules. The examiner also finds that evidence of a suggestion, teaching, or motivation to combine prior art references may flow, inter alia, from the references themselves, the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. See *In re Dembiczak*, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

Regarding Applicants' argument on page 15, last paragraph that there is no discussion in the prior art about destination databases or modifying the contents of one dataset based on the contents of a second dataset that is extracted from a destination database. Examiner finds the argument not persuasive. In paragraph 0011, Vedula et al. teach "the source and target objects may be schemas, spreadsheets, documents, databases, or other information sources, and the graphical mapping indicia may include link indicia and/or function objects linking nodes in the target object with nodes in the source objects. The mapping may be compiled into code used by a runtime engine to translate source documents into target documents, for example, in business to business information exchange applications."

Vedula et al. also teach:

"In addition, once a mapping (e.g., mapping 14) has been created, a user may replace one or both of the source and target objects 6 and/or 10 with another information source/destination, while preserving at least a portion of the mapping 14 and associated links. The user interface 2 accordingly maintains links, where possible, using node name association and other techniques to re-establish links with the new object or objects. In this way, a user may modify one or both of the objects 6 and/or 10 using an editor tool or the like, and then re-insert the modified object into the user interface 2 without sacrificing mapping work product." – par. 0071.

"The hierarchy matching algorithm employed by the compiler for particular user-defined links 16a may be a parameter associated with such links. As such, a user may select a particular link 16a and modify the compiler directive property of such link via the link properties page (e.g., as described above). Thus, a user may generate compiler links 90 using a compiler (not shown), and thereafter modify compiler directive properties associated with particular user defined links 16a. In addition, a user may modify the compiler links 90 by selecting them using a user interface selection device (e.g., a mouse) and guiding them to other tree nodes as desired. The compiler will then take this user feedback and thereafter

generate output code using the user modified compiler links 90... The output code screen 96 allows the user to immediately review the results of the mapping compilation.

Based on this output code, the user may selectively modify compiler directives by selecting appropriate user defined links 16a, and/or select and redirect compiler links 90 via a user interface selection device. The interface thus provides an easy to use graphical environment in which object translation mappings may be created and customized. As described in greater detail with respect to FIGS. 11A and 11B infra, the output code screen 96 may further indicate compiler errors or warnings which may be selected by a user to thereby graphically indicate in the mapping screen region 12, function objects 16b and/or links 16a associated with the particular warning." – pars. 0086-0087.

"The user interface 2 may further comprise a mapping preview page region 110 in which a mapping preview screen or page 112 may be displayed. The mapping preview page 112 is adapted to display the entire mapping (e.g., mapping 100 of FIG. 9A) in the region 110. The page 112 thus allows the user to identify where function objects 16b are located in cases where the translation map 100 is highly complicated. In addition, the page 112 may further comprise a current region indicia 114 (illustrated as a box in FIG. 9C) adapted to indicate the portion of the mapping 100

currently being displayed in the mapping screen region 12. The user may select or move the current region indicia 114 within the mapping preview page region 110 to thereby change the portion of the mapping 100 currently displayed in the mapping screen region 12 accordingly. The selection and movement of the current region indicia 114 may be accomplished via a user interface selection device" and "The user may view the output page 190 and the output instance 192, and based on the output, the user may modify the document translation mapping 180 by modifying the graphical mapping indicia in region 12." – pars. 0090 and 009696.

Thus, based on the output code or once a mapping has been created or compiler errors or warnings, "users may replace one or both of the source code and target objects with another information source/destination" or "thereafter modify compiler directive properties associated with particular user defined links...and guiding them to other tree nodes as desired" as cited above, which would create the reading from the destination database a second destination dataset, and modifications of link directives etc... for nodes would occur.

Regarding Applicants' argument on page 16, last paragraph that "Neither Vedula et al., nor Alao et al., teach the specific design composed of a

central bridge component that performs XML to XML translation
communicatively coupled with multiple application specific gateway
components that translate XML into application specific formats...”

Examiner finds the argument not persuasive. Vedula et al. teach:

“Referring now to FIG. 2, an application of the invention is illustrated schematically, wherein a system 20 includes a source XML document 22, a target XML document 24, with an XSL engine 26 therebetween. The XSL engine 26 may comprise, for example, a computer system, which provides data transformations between the source XML document 22 and the target XML document 24 in accordance with an XSLT map 28 generated graphically in accordance with the invention. In this regard, the graphical user interface 2 of FIG. 1 may be used to create a mapping (not shown), which is then compiled into the computer executable instructions or codes, for example, XSLT code (e.g., map 28), and run by the engine 26 in performing the data transformation.” – par. 0072.

However, Vedula et al. do not teach “multiple application specific gateway components”. Alao et al. teach “service gateway for interactive television” – the title. Alao et al. teach: “the service gateway provides asymmetrical routing, data compression and encryption to optimize client processing power and communication link bandwidth. The service gateway enables content translation between clients and service providers.” – the abstract; content translations – pars. 0028, 0129, 0139, 0142,

0152, 0164-0166. Alao et al. teach acknowledging a successful transmission of the destination dataset - pars. 0040, 0079, 0082-0083, 0088, 0090. Alao et al. teach: "a plurality of application specific gateway components, communicatively coupled to said bridge component, each gateway transforming XML documents to and from documents in application specific formats" – pars. 0045, 0099-0100, 0139, 0146, 0150-0151, 0173-0174, 0197; fig. 6, items 1018-1523 (service gateway with applications protocols and application servers).

Regarding Applicants' argument on page 20, last paragraph that "neither Williams nor Vedula et al., discusses scanning a database for outgoing requests". The Examiner finds the argument not persuasive. In order to initiate the translation process to convert a source dataset to a neutral dataset, requests for the translation must have been received/read/scanned/checked on. In paragraph 0011, Vedula et al. teach "the source and target objects may be schemas, spreadsheets, documents, databases, or other information sources, and the graphical mapping indicia may include link indicia and/or function objects linking nodes in the target object with nodes in the source objects. The mapping may be compiled into code used by a runtime engine to translate source documents into target documents, for example, in business to business information exchange applications." Vedula et al. teach converting source dataset to a neutral

dataset according to a source schema – pars. 0009, 0068, 0071-0072;
sending the neutral dataset to a destination via a network interface – pars.
0008, 0067, 0100. Vedula et al. do not explicitly disclose scanning a
database for outgoing requests. However, Williams teaches “method and
apparatus to make and transmit objects from a database on a server
computer to a client computer” – the title; data schemas and translating of
data objects into desired data objects – col. 4, lines 48-59; col. 7, lines 27-
51; scanning a database - col. 10, lines 3-17; col. 22, lines 7-9; col. 35,
lines 4-15. Thus, it would have been obvious to one of ordinary skill in the
art at the time of the invention to combine Vedula et al.’s teaching with
Williams’ teaching in order to efficiently and quickly read requests from a
database. However, the examiner also finds that evidence of a suggestion,
teaching, or motivation to combine prior art references may flow, inter alia,
from the references themselves, the knowledge of one of ordinary skill in the
art, or from the nature of the problem to be solved. See *In re Dembiczak*,
175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

Regarding Applicants’ argument on page 22, 2nd last paragraph that “Draper
et al. also fails to teach all the elements of claim 27, including, for example,
an SQL to XML translator”. The Examiner finds the argument not

persuasive. XML to SQL or SQL to XML translations are not novel in the art. However, Draper et al. teach an SQL to XML translator, an XML to SQL translator – col. 1, line 65 to col. 2, line 20; col. 7, line 17 to col. 8, line 45. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Vedula's teaching with Dungan et al.'s teaching in order to allow communications between different computer systems (XML and SQL).

Regarding Applicants' argument on page 23 regarding claims 16-17 that "...It does not discuss replacing null values in a dataset with other values...The context has nothing to do with the transformation of datasets." The Examiner finds the argument not persuasive.

Vedula et al. teach:

"In addition, once a mapping (e.g., mapping 14) has been created, a user may replace one or both of the source and target objects 6 and/or 10 with another information source/destination, while preserving at least a portion of the mapping 14 and associated links. The user interface 2 accordingly maintains links, where possible, using node name association and other techniques to re-establish links with the new object or objects. In this way, a user may modify one or both of the objects 6 and/or 10 using an editor tool or the like, and then re-insert the modified object into the user interface 2 without sacrificing mapping work product." – par. 0071.

"The hierarchy matching algorithm employed by the compiler for particular user-defined links 16a may be a parameter associated with such links. As such, a user may select a particular link 16a and modify the compiler directive property of such link via the link properties page (e.g., as described above). Thus, a user may generate compiler links 90 using a compiler (not shown), and thereafter modify compiler directive properties associated with particular user defined links 16a. In addition, a user may modify the compiler links 90 by selecting them using a user interface selection device (e.g., a mouse) and guiding them to other tree nodes as desired. The compiler will then take this user feedback and thereafter generate output code using the user modified compiler links 90... The output code screen 96 allows the user to immediately review the results of the mapping compilation.

Based on this output code, the user may selectively modify compiler directives by selecting appropriate user defined links 16a, and/or select and redirect compiler links 90 via a user interface selection device. The interface thus provides an easy to use graphical environment in which object translation mappings may be created and customized. As described in greater detail with respect to FIGS. 11A and 11B infra, the output code screen 96 may further indicate compiler errors or warnings which may be selected by a user to thereby

graphically indicate in the mapping screen region 12, function objects 16b and/or links 16a associated with the particular warning." – pars. 0086-0087.

"The user interface 2 may further comprise a mapping preview page region 110 in which a mapping preview screen or page 112 may be displayed. The mapping preview page 112 is adapted to display the entire mapping (e.g., mapping 100 of FIG. 9A) in the region 110. The page 112 thus allows the user to identify where function objects 16b are located in cases where the translation map 100 is highly complicated. In addition, the page 112 may further comprise a current region indicia 114 (illustrated as a box in FIG. 9C) adapted to indicate the portion of the mapping 100 currently being displayed in the mapping screen region 12. The user may select or move the current region indicia 114 within the mapping preview page region 110 to thereby change the portion of the mapping 100 currently displayed in the mapping screen region 12 accordingly. The selection and movement of the current region indicia 114 may be accomplished via a user interface selection device" and "The user may view the output page 190 and the output instance 192, and based on the output, the user may modify the document translation mapping 180 by modifying the graphical mapping indicia in region 12." – pars. 90 and 96.

Thus, based on the output code or once a mapping has been created or compiler errors or warnings, "users may replace one or both of the source code and target objects with another information source/destination" or "thereafter modify compiler directive properties associated with particular user defined links...and guiding them to other tree nodes as desired" as cited above, which would create the reading from the destination database a second destination dataset, and modifications of link directives etc... for data source/destination would occur. However, Vedula et al. do not explicitly suggest null data values. Dungan et al. teach "intelligent network" – the title. Dungan et al. teach "performs any data translation and formatting functions for receiving data from external systems and distributing data from SA to external systems..." col. 14, lines 43-46. Dungan et al. teach replacing null data values in the first dataset with corresponding data values from the second destination dataset, the correspondence being pre-specified constant values – col. 46, lines 8-65; col. 110, line 25 to col. 111, line 35.

Conclusion

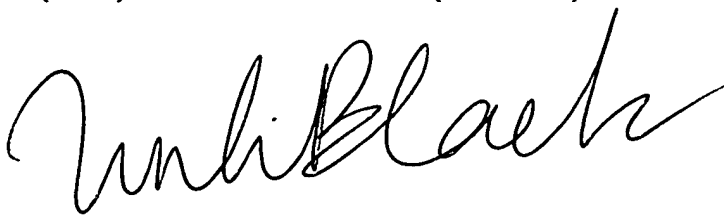
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 571-272-4106. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LINH BLACK
Examiner
Art Unit 2163

February 14, 2006



Primary Examiner
Art Unit 2167